



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

/dgm-357

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In reply refer to: M-89-111 through -145

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The National Transportation Safety Board has been committed to improving the safety of passenger vessels carrying U.S. passengers from U.S. ports. The Safety Board recently completed a study that reviewed safety issues for three broad groups of vessels: domestic passenger vessels, foreign flag passenger vessels operating from U.S. ports and carrying U.S. passengers, and some State-regulated domestic passenger vessels.

The safety issues relevant to each group of vessels, and the basis for the subsequent recommendations issued by the Safety Board, are discussed in detail in the publication about the study.^{1/} Copies of the publication are enclosed. Safety issues discussed in Part 1, "Domestic Passenger Vessels," include:

Licensing of masters of small passenger vessels.--In some accidents, the masters of small passenger vessels had insufficient knowledge of safety regulations. This report reviews the need for licensing improvements.

Training of masters and crewmembers.--Many accidents indicate the need for training and operational and emergency procedures manuals. The report examines training and the need for emergency procedures manuals.

Requirements for basic safety equipment and manning.--Gross tonnage (admeasurement) of a small passenger vessel dictates the emergency equipment requirements. The study discusses admeasurement and its relationship to safety equipment and manning requirements.

^{1/} National Transportation Safety Board. 1989. Safety study: Passenger vessels operating from U.S. ports. NTSB/SS-89/01. Washington, DC. 175 p.

Lifesaving equipment requirements.--In some accidents, the vessels lacked sufficient life saving equipment to keep all passengers out of the water. The report examines the Coast Guard's role in determining the need to require lifesaving equipment that keeps people out of the water and lists other reasons for requiring such equipment.

Passenger information and drills.--In many accidents, the vessel did not have an accurate passenger list or count. The study examines the need for passenger information and drills.

Alcohol and drug use by crewmembers.--Rules related to alcohol and drug use have been issued to domestic passenger vessel operations. The report discusses the impact of those rules.

Fatigue.--Fatigue can play a role in performance degradation of masters and crewmembers responsible for the safety of many passengers on vessels. The report addresses this issue based on the Coast Guard's response to a past safety recommendation and other information.

Safety issues discussed in Part 2, "Foreign Flag Passenger Vessels," include:

Safety oversight.--The Coast Guard has authority to examine foreign flag passenger vessels for compliance with international conventions. The report discusses the national law and international requirements giving that authority and the role of the International Maritime Organization (IMO) and the primary safety convention, the "Safety of Life at Sea," known as SOLAS.

Fire protection.--Investigations of some accidents indicate that the international requirements relating to fire protection are not adequate. The report examines past recommendations of the Safety Board to improve international requirements for fire protection for newly designed large, open areas on passenger vessels. Some provisions of the international requirements are open to wide interpretation by the country of registry of the vessel.

Shoreside fire contingency planning.--The Safety Board's investigations indicate a need for better coordination between local fire departments, port administrations, and passenger vessels in port. The report reviews actions taken on past

Safety Board recommendations relating to fire safety at shoreside and discusses practices proposed by the National Fire Protection Association.

Training and drills.--Investigations of some accidents indicate the need for definitive training and drills in firefighting and emergency procedures. The study examines the need for training and drills.

Language barriers.--The report examines language barriers in some accidents.

Accident reporting and investigation.--The report examines the role of the United States in more actively participating in receiving reports and investigating serious casualties involving foreign flag passenger vessels that operate from U.S. ports and carry U.S. passengers.

Interpretation of SOLAS.--The study examines difficulties experienced by the U.S. Coast Guard in verifying safety certificates for some foreign flag passenger vessels because of differences in interpreting SOLAS requirements.

Use of U.S. Subchapter T regulations.--At least one flag Administration is exempting some passenger vessels from all SOLAS requirements and is using U.S. Subchapter T regulations. The study discusses this use of the rules to circumvent more stringent SOLAS requirements.

Location of life jackets.--The location of life jackets can be critical to the safety of passengers in an emergency. Two issues are addressed in this report: (1) the need for consistent information provided to passengers on the location of life jackets; and (2) the need for a sufficient number of life jackets at muster stations.

Mass casualty planning.--The report discusses the need for a mass casualty plan in the event of an emergency.

Application of U.S. alcohol and drug rules to foreign flag passenger vessels.--Alcohol/drug rules have been promulgated by the U.S. Coast Guard applicable to marine employers who must apply these rules to foreign citizens who are employed or contracted by a U.S. company. The study discusses this issue.

As a result of this safety study, the National Transportation Safety Board reiterates to the U.S. Coast Guard the following safety recommendations applicable to domestic passenger vessels:

M-83-79

Amend 46 CFR 185.25 to require that a safety orientation briefing, which includes a demonstration of the proper method of donning life preservers, be provided to passengers on board small passenger vessels that operate on other than protected waters. This briefing should include a statement that all passengers will be requested to don life preservers when possibly hazardous conditions may be expected to be encountered.

M-84-25

Require that passenger vessels with more than one passenger deck have installed an adequate loudspeaker system suitable for announcing passenger advisories, instructions, and emergency alerts from the navigation bridge.

M-84-27

Require that all passenger vessels post conspicuously in passenger spaces passenger safety bills or equivalent instructions for emergency, written in language understandable to nonmariners.

M-86-60

Require fire and boat (abandon ship) drills which include passengers reporting to their emergency muster station on all passenger vessels within 24 hours of departure on cruises that are more than one day's duration.

M-86-61

Require that all passenger vessels except ferries on river routes operating on short runs of 30 minutes or less have primary lifesaving equipment that prevents immersion in the water for all passengers and crew.

M-86-64

Require all passenger vessels that have overnight accommodations for 50 or more passengers to meet the construction, licensing, and manning requirements for a passenger vessel over 100 gross tons.

M-86-72

Require that all passengers receive a comprehensive safety briefing by a crewmember soon after boarding a passenger vessel.

M-86-73

Require comprehensive training of passenger vessel crews in emergency procedures that includes demonstrating proficiency in the use of emergency equipment.

M-86-76

Require that the master or licensed operator of all passenger vessels, except ferries on short routes, deposit an accurate passenger and crew manifest ashore before sailing, and update the manifest during the voyage. Require the master of ferries on short routes to keep an accurate count of all persons aboard.

M-87-113

Amend 46 CFR 185.25-1(d) to require that a licensed crewmember present a verbal passenger safety briefing, which includes all the subjects listed in 46 CFR 185.25-1(d) (1) through (4), to all passengers before getting underway.

M-87-115

Amend 46 CFR Part 187 to establish qualification standards for deckhands on small passenger vessels. [Note: Since this recommendation was issued in 1987, Part 187 was incorporated in 46 CFR Part 10. Amendments resulting from this recommendation would thus be made to 46 CFR Part 10.]

M-88-9

Require that operators of all inspected radar-equipped passenger vessels under 300 gross tons be qualified as radar observers.

M-88-10

Require, in the current regulatory project (CGD 85-080) concerning small passenger-carrying vessels, that safety standards relative to construction, lifesaving equipment,

firefighting equipment, and manning and licensing be based on the number of passengers carried rather than the gross tonnage of the vessel.

M-88-44

Establish watch and duty time limitations for crewmembers on board ferries and other inspected passenger vessels.

Also as a result of this safety study, the National Transportation Safety Board reiterates to the U.S. Coast Guard the following safety recommendations applicable to foreign flag passenger vessels:

M-85-59

Propose to the International Maritime Organization an amendment to SOLAS 74 to require that passenger ships on short international voyages conduct drills or safety orientations for passengers at muster stations immediately upon departure from port. Safety orientation briefings should include a demonstration on the donning of life preservers, evacuation or disembarkation routes, information concerning the function of automatic fire doors, and actions to take in the event of a fire or other emergency.

M-89-43

Seek legislative authority to regulate and directly surveil the safety of foreign passenger vessels as a condition for operating from U.S. ports.

M-89-44

Seek legislative authority to require that all passenger vessels operating from U.S. ports and embarking U.S. passengers intergrate smoke detectors into local ventilation systems to shut down the ventilation systems automatically when the detector is activated to prevent the spread of smoke.

As a result of this safety study, the National Transportation Safety Board recommends that the U.S. Coast Guard:

Establish and administer examinations to test the competency of masters operating domestic small passenger vessels carrying six passengers for hire. Areas to be tested are: damage stability, firefighting systems equipment and regulations, emergency steering, emergency procedures prior to and after grounding, and electronic navigation including radar. (Class II, Priority Action) (M-89-111)

Develop and implement regulations to require that domestic small passenger vessels carrying more than six passengers have appropriate operating and emergency manuals for crewmembers explaining the owner's and operator's policies and procedures. (Class II, Priority Action) (M-89-112)

Require owners and/or operators of all domestic small passenger vessels to keep records that include information on training provided to crewmembers and emergency drills in use of safety equipment, firefighting and man-overboard rescue, and other safety-related information. (Class II, Priority Action) (M-89-113)

Amend 46 CFR Part 16 to require marine employers to monitor relevant behavior and performance such as work attendance, work habits, and motor vehicle driving records of all marine employees in safety-sensitive positions and to recommend counseling to those employees whose work attendance, work habits, or motor vehicle driving records are consistent with possible alcohol and/or drug abuse. (Class II, Priority Action) (M-89-114)

Amend 46 CFR Part 16 to require annual drug and alcohol detection training for all employees who are required to monitor fitness for duty of other marine employees in safety-sensitive positions. (Class II, Priority Action) (M-89-115)

Require all domestic passenger vessels that carry 50 or more passengers and that operate on all routes other than rivers be equipped with an operating gyrocompass. (Class II, Priority Action) (M-89-116)

Require all domestic passenger vessels that carry 50 or more passengers and that operate on all routes other than rivers be equipped with an operating gyrostabilized radar. (Class II, Priority Action) (M-89-117)

Require all domestic passenger vessels that operate on all routes other than rivers be equipped with an operating fathometer. (Class II, Priority Action) (M-89-118)

Require all domestic passenger vessels that operate on all routes other than rivers be equipped with an operating electronic position-fixing device such as loran or a satellite receiver. (Class II, Priority Action) (M-89-119)

Require a fixed firefighting system in the engineroom (without regard to the type of fuel used for propulsion for domestic small passenger vessels. (Class II, Priority Action) (M-89-120)

Include in the final rule on "Small Passenger Vessel Inspection and Certification" a phase-in period of 3 years for the full implementation of float-free 406.025 MHz satellite emergency position indicating radio beacons (EPIRBs) for small passenger vessels operating on ocean or coastwise routes. (Class II, Priority Action) (M-89-121)

Seek legislative authority to require all foreign flag passenger vessels, regardless of gross tonnage, to meet SOLAS 74 requirements as a condition for operating from U.S. ports and embarking U.S. passengers. (Class II, Priority Action) (M-89-122)

Examine and verify that all foreign flag passenger vessels, regardless of gross tonnage, operating from U.S. ports and embarking U.S. passengers meet all SOLAS requirements. (Class II, Priority Action) (M-89-123)

Seek legislative authority to require that passenger vessels, as a condition for operating from U.S. ports and embarking U.S. passengers, have safety fire protection improvements including but not limited to:

- o A centralized automatic/manual fire control system on the navigating bridge that integrates the fire detector, automatic fire door controls, the ventilation system controls, and general alarm into a unified system. (Class II, Priority Action) (M-89-124)
- o Integrated heat and/or smoke detectors with automatic fire door release switches so that the doors will close automatically when the detectors are activated. (Class II, Priority Action) (M-89-125)
- o A sprinkler system installed in accommodation areas regardless of the method of fireproof construction used. (Class II, Priority Action) (M-89-126)
- o Hose ports in all fire doors so that these doors may be fully closed when fire hoses have to be led through the doors. (Class II, Priority Action) (M-89-127)
- o Lined linen fire hoses or equivalent that replace unlined linen fire hoses. (Class II, Priority Action) (M-89-128)
- o A crew composition in each passenger vessel department such that at least 75 percent of the crew responsible for emergency, firefighting, and lifesaving service be able to understand and communicate in a common language with the officers and to understand and communicate in English with passengers. (Class II, Priority Action) (M-89-129)

Propose to the International Maritime Organization that low power, small emergency lights be required to be installed at floor level in accommodation areas and passageways that direct passengers to emergency exits on all passenger vessels regularly operating from U.S. ports and embarking U.S. passengers. (Class II, Priority Action) (M-89-130)

Propose to the International Maritime Organization that periodic training in marine firefighting techniques be required for deck and engineering officers on all passenger vessels. (Class II, Priority Action) (M-89-131)

Propose to the International Maritime Organization that crewmembers with firefighting responsibilities on board passenger vessels be certificated by the flag Administration to have completed a practical firefighting training course. (Class II, Priority Action) (M-89-132)

Propose to the International Maritime Organization that passenger vessels carrying more than 500 passengers and crew on international routes establish a full-time professional firefighter position. (Class II, Priority Action) (M-89-133)

Amend regulations in 46 CFR Subchapter H, "Passenger Vessels," to require hose ports for U.S. passenger vessels in all fire doors so that these doors may be fully closed when fire hoses have to be led through fire doors. (Class II, Priority Action) (M-89-134)

Propose to the International Maritime Organization to require that all operators of passenger vessels subject to SOLAS requirements develop and distribute to crewmembers with firefighting responsibilities a training manual that contains instructions and information on firefighting and detailed actions required by crewmembers in the event fire occurs. (Class II, Priority Action) (M-89-135)

Develop a program to assess and monitor communication skills of crewmembers on foreign flag passenger vessels whose duties involve emergency, firefighting, and lifesaving service and who by the nature of the service must interact with U.S. passengers so that language barriers are eliminated. (Class II, Priority Action) (M-89-136)

Propose to the International Maritime Organization to develop and implement international standards and recommended practices for maritime accident investigation. (Class II, Priority Action) (M-89-137)

Propose to the International Maritime Organization to provide a universal simplified accident reporting system, and prepare periodic reports similar to those issued by the International Civil Aviation Organization. (Class II, Priority Action) (M-89-138)

Seek legislative authority to require any passenger vessel regularly operating from U.S. ports and embarking U.S. passengers to report to the U.S. Coast Guard any accident in international waters, including but not limited to such accidents as groundings; collisions; loss of main propulsion or steering; or loss resulting in a reduction of maneuvering capabilities; or an occurrence materially and adversely affecting the vessel's seaworthiness or fitness for service or route, including fire, flooding, or failure of or damage to fixed fire-extinguishing systems, lifesaving equipment, or auxiliary power generating equipment. (Class II, Priority Action) (M-89-139)

Seek legislative authority to investigate accidents in international waters involving any passenger vessel regularly operating from U.S. ports and embarking U.S. passengers, including but not limited to such accidents as groundings; collisions; loss of main propulsion or, steering; or loss resulting in a reduction of maneuvering capabilities; or an occurrence materially and adversely affecting the vessel's seaworthiness or fitness for service or route, including fire, flooding, or failure of or damage to fixed fire-extinguishing systems, lifesaving equipment, or auxiliary power generating equipment. (Class II, Priority Action) (M-89-140)

Disseminate the National Fire Protection Association's "Recommended Practice for Land-based Fire Fighters Who Fight Marine Vessel Fires" to captains of the ports, port authorities, marine employers, land-based firefighters, and others so that an increased level of preparedness and contingency planning is accomplished at port locations where passenger vessels berth. (Class II, Priority Action) (M-89-141)

Propose to the International Maritime Organization, International Labor Organization, and the World Health Organization to require a mass casualty emergency plan that addresses the capabilities of passenger vessels to adequately provide health protection and medical care to passengers in a serious emergency. (Class II, Priority Action) (M-89-142)

Propose to the International Maritime Organization an amendment to SOLAS to require life jackets at muster stations for all passengers in addition to those life jackets stowed in cabins. (Class II, Priority Action) (M-89-143)

Propose to the International Maritime Organization that it develop and adopt a resolution against the use of alcohol and/or impairing drugs for any personnel in safety-sensitive positions while engaged in commercial passenger vessel operation. (Class II, Priority Action) (M-89-144)

Propose to the International Maritime Organization that it develop and adopt a standard protocol for chemical testing for alcohol and/or impairing drugs of responsible vessel personnel after marine accidents. (Class II, Priority Action) (M-89-145)

As a result of this safety study, the National Transportation Safety Board has reclassified six safety recommendations issued to the U.S. Coast Guard between 1985 and 1987. The recommendations, listed below, have been superseded by new recommendations resulting from this safety study.

M-85-33

Amend U.S. regulations and seek international agreement to require passenger ships to be provided with hose ports in all fire doors so that they may be fully closed when fire hoses have to be led through fire doors.

Status: "Closed--Unacceptable Action/Superseded" by Safety Recommendations M-89-127 and M-89-134.

M-85-34

Expedite U.S. rulemaking and seek international agreement to require all passenger vessels to have sprinkler system installed to accommodation areas regardless of the type of fireproof construction used.

Status: "Closed--Superseded" by Safety Recommendation M-89-126.

M-85-60

Propose to the International Maritime Organization an amendment to SOLAS 74 to require that heat or smoke detectors be made a part of each automatic fire door release switch on passenger ships so that the door will close when the detector is activated.

Status: "Closed--Superseded" by Safety Recommendation M-89-125.

M-85-61

Propose to the International Maritime Organization an amendment to SOLAS 74 to require that all passenger ships carrying more than 36 persons on international routes have an automatic/

manual fire control system in the pilothouse that integrates the fire detectors, the automatic fire door controls, the ventilation system controls, and the general alarm into a unified system.

Status: "Closed--Superseded" by Safety Recommendation M-89-124.

M-86-59

Require a fixed firefighting system in the engineroom (without regard to the type of fuel used for propulsion) of all passenger vessels with accommodations for 50 or more overnight passengers.

Status: "Closed--Superseded" by Safety Recommendation M-89-120.

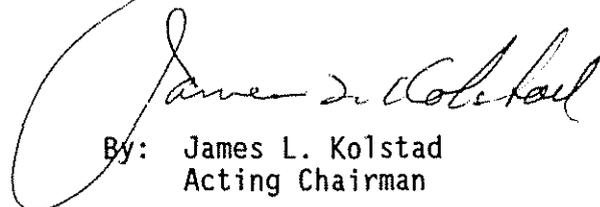
M-86-65

Require the masters of all passenger vessels that have overnight accommodations for 50 or more passengers to pass an examination on applicable sections of 46 CFR Subchapter H regulations, including subdivision, damage stability, structural fire protection, and electronic navigation.

Status: "Closed--Superseded" by Safety Recommendation M-89-111.

Also as a result of the safety study, the National Transportation Safety Board issued Safety Recommendation M-89-146 to the National Association of Passenger Vessel Owners, M-89-147 and -148 to the Cruise Lines International Association, M-89-149 to the National Association of State Boating Law Administrators, M-89-150 to cruise vessel owners and operators, M-89-151 to Washington State Ferries, and M-89-152 to the Governor and legislative leaders of the State of Washington.

KOLSTAD, Acting Chairman, BURNETT, LAUBER, NALL, and DICKINSON, Members, concurred in these recommendations.


By: James L. Kolstad
Acting Chairman